

## ABSTRACT OF THE DISCLOSURE

A FAX-through data network includes a receiver side LAN end station and a sender side LAN end station. A first converter receives a FAX communication from the sender FAX and generates a FAX packet. The FAX packet includes a receiver FAX-network ID. A FAX-network server receives the FAX packet, extracts the receiver FAX-network ID, performs a lookup of a destination IP address in a mapping table and forwards the FAX packet to the destination IP address. Multiple mapping tables can be distributed in a hierarchical fashion, allowing querying and updating of multiple lookup tables as needed. A second converter intercepts and identifies the FAX packet, extracts the FAX communication from the FAX packet, establish a communication with the receiver FAX without routing a signal through the PSTN and transmits the FAX communication to the receiver FAX machine. A remote access appliance control apparatus includes an appliance side LAN end station. An appliance control packet is generated by the remote network user and includes an appliance network ID and the control command. An appliance network server receives the appliance control packet, extracts the appliance network ID, looks-up a corresponding destination IP address in a mapping table, and forwards the appliance control packet to the destination IP address. Multiple mapping tables can be distributed in a hierarchical fashion, allowing querying and updating of multiple lookup tables as needed. An appliance converter intercepts and identifies the appliance control packet, extracts the control command and asserts the control command to the appliance using the appliance communication protocol. Advantages include the ability to share the IP address of a LAN end station. The invention also eliminates local and long distance toll cost charge for FAX communication, reduces latency and controls bandwidth.